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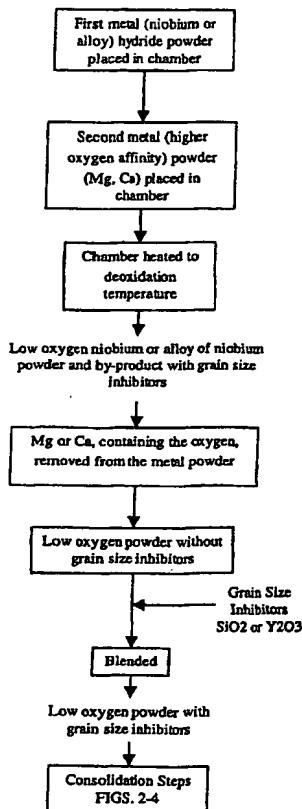
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## (54) Title: STABILIZED GRAIN SIZE REFRACtORY METAL POWDER METALLURGY MILL PRODUCTS



(57) Abstract: A powder metal (P/M) mill product and the method of fabrication such product made out of low oxygen (<400 ppm) refractory metal, or alloys thereof, using oxide additive (such as MgO, SiO<sub>2</sub>, and Y<sub>2</sub>O<sub>3</sub>) for co-fabrication to achieve refractory metal grain size stabilization as required in high temperature applications. One such product is a sheet with small grain size containing oxide particles as grain size stabilizers. The product has good mechanical properties, low oxygen content in refractory metal fiber derivatives of the powder within the mill product and if is available as large pieces of sheet (lateral dimensions). The metal powder is consolidated to a sheet bar by different methods, which may weigh 50 pounds or more.